

Riteflex® 672

Thermoplastic Copolyester Elastomer

Celanese Corporation

Message:

Riteflex 672 is a 72 Shore D Hardness thermoplastic polyester elastomer with a high modulus.

General Information			
UL YellowCard	E45575-239421		
Features	Rigidity, high		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.25	g/cm ³	ASTM D792
--	1.26	g/cm ³	ISO 1183
Specific Volume	0.802	cm ³ /g	ASTM D792
Ross Flex	> 1.0E+6	Cycles	Internal method
Tear Strength	217.2	kN/m	ASTM D1004
Melt Mass-Flow Rate (MFR)			
--	10 - 15	g/10 min	ASTM D1238
-- ¹	16	g/10 min	ISO 1133
Molding Shrinkage			
Flow	2.0	%	ASTM D955
Vertical flow direction	1.7 - 2.2	%	ISO 294-4
Flow direction	1.7 - 2.2	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
Shaw D	72		ASTM D2240
Shaw D, 15 seconds	72		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	635	MPa	ASTM D638
--	500	MPa	ISO 527-2/1A/1
Tensile Stress			
Yield	28.0	MPa	ISO 527-2/1A/50
Fracture, 23°C	29.2	MPa	ASTM D638
Fracture	40.0	MPa	ISO 527-2
5.0% strain	21.0	MPa	ISO 527-2
10% strain	27.0	MPa	ISO 527-2
50% strain	25.0	MPa	ISO 527-2
Tensile Strain			

Yield	19	%	ISO 527-2/1A/50
Fracture, 23°C	300	%	ASTM D638
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/1A/50
Flexural Modulus			ISO 178
-40°C	2400	MPa	ISO 178
23°C	450	MPa	ISO 178
Flexural Stress (23°C)	22.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, CS-18 Wheel)	30.0	mg	ASTM D4060
Elastomers	Nominal Value	Unit	Test Method
Tear Strength			
--	214	kN/m	ASTM D624
Flow ²	190	kN/m	ISO 34-1
Compression Set (23°C)	< 1.0	%	ASTM D395
Bayshore Resilience			
--	40	%	Internal method
--	40	%	ASTM D2632
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.5	kJ/m ²	ISO 179/1eA
23°C	19	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-40°C	4.8	kJ/m ²	ISO 180/1A
23°C	16	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	118	°C	ISO 75-2/B
Glass Transition Temperature	-23.3	°C	ASTM D3418
Vicat Softening Temperature	204	°C	ASTM D1525
Melting Temperature			
-- ³	215	°C	ISO 11357-3
--	214	°C	ASTM D3418
CLTE - Flow			
--	1.7E-4	cm/cm/°C	ASTM D696
--	1.4E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+17	ohms	IEC 60093
Dielectric Strength	28	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.70		IEC 60250
Dissipation Factor (1 MHz)	0.040		IEC 60250

Comparative Tracking Index	> 600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.050	%	
Suggested Max Regrind	25	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	215 - 230	°C	
Middle Temperature	215 - 230	°C	
Front Temperature	215 - 230	°C	
Nozzle Temperature	215 - 230	°C	
Processing (Melt) Temp	220 - 235	°C	
Mold Temperature	20.0 - 55.0	°C	
Injection Rate	Moderate-Fast		
Back Pressure	0.00 - 0.345	MPa	
Injection instructions			
Manifold Temperature: 220 to 235°CZone 4 Temperature: 215 to 230°CFeed Temperature: 200 to 215°C			
NOTE			
1.	2.16 kg		
2.	Die C		
3.	10°C/min		

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